

REPLACEMENT CLAIMS

subc1

b1

19. (twice amended) A dual damascene structure comprising:

- a semiconductor substrate;
- a first insulating layer provided over said semiconductor substrate;
- a metal layer provided within said first insulating layer;
- a second insulating layer provided over said metal layer;
- a via situated within said second insulating layer and extending to at least a portion of said metal layer, said via being lined with an organo-metallic-atomic deposited titanium-silicon-nitride layer and filled with a copper material;
- a third insulating layer located over said second insulating layer;
- a trench situated within said third insulating layer and extending to said via, said trench being lined with said organo-metallic-atomic deposited titanium-silicon-nitride layer and filled with said copper material.

subc3

b2

31. (twice amended) A damascene structure comprising:

- a semiconductor substrate;
- a first insulating layer provided over said semiconductor substrate;
- a metal layer provided within said first insulating layer;
- at least another insulating layer provided over said metal layer, said at least another insulating layer including a material selected from the group consisting of polyimide, spin-on-polymers, flare, polyarylethers, parylene, polytetrafluoroethylene, benzocyclobutene, SILK, fluorinated silicon oxide, hydrogen silsesquioxane and NANOGLASS; and

B2
und

at least one opening situated within said at least another insulating layer and extending to at least a portion of said metal layer, said opening being lined with a titanium-silicon-nitride layer and filled with a copper material.

subC8

40. (twice amended) A processor-based system comprising:

a processor; and

B3

an integrated circuit coupled to said processor, at least one of said processor and integrated circuit including a damascene structure, said damascene structure comprising a metal layer provided within a first insulating layer formed over a substrate, at least another insulating layer provided over said metal layer, and at least one opening situated within said at least another insulating layer and extending to at least a portion of said metal layer, said opening being lined with an organo-metallic-atomic deposited titanium-silicon-nitride layer and filled with copper.